

Aluminum Galvanic Cell

Abstract

The present invention provides a galvanic cell having an aluminum anode and a cathode compartment design suitable for carrying out the aqueous electrochemical reaction between solid aluminum metal and aqueous peroxide ions. The galvanic cell is activated when water, aqueous hydroxide solution, or an aqueous salt solution is added to the cell. This reaction releases a significant amount of electrochemical energy from a small size (mass or volume) cell. This cell reaction and design leads to an improvement in energy released over state-of-the-art aluminum/hydrogen peroxide galvanic cells.